



PUBLIC NOTICE

Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

News Media Information 202 / 418-0500
Internet: <https://www.fcc.gov>
TTY: 1-888-835-5322

DA 17-524
May 26, 2017

SATELLITE POLICY BRANCH INFORMATION

APPLICATIONS ACCEPTED FOR FILING

CUT-OFF ESTABLISHED FOR ADDITIONAL NGSO-LIKE SATELLITE APPLICATIONS OR PETITIONS FOR OPERATIONS IN THE 12.75-13.25 GHz, 13.85-14.0 GHz, 18.6-18.8 GHz, 19.3-20.2 GHz, and 29.1-29.5 GHz BANDS

Report No. SPB-271

The following license applications and petitions for U.S. market access, which were filed in response to the processing round opened on July 15, 2016 for non-geostationary orbit (NGSO)-like fixed-satellite service (FSS) systems,¹ have, except as specifically stated below, been accepted for filing:

Telesat Canada (SAT-PDR-20161115-00108)

Telesat Canada requests U.S. market access for a NGSO FSS system (Call Sign S2976), which Telesat states will be licensed by Canada. Telesat seeks market access for at least 117 low-Earth orbit (LEO) satellites, operating in a combination of polar orbits at 1000 km and inclined orbits at an altitude of 1248 km. Telesat seeks market access in the 17.8-18.6 GHz, 18.8-19.3 GHz, and 19.7-20.2 GHz (space-to-Earth) frequency bands and in the 27.5-29.1 GHz and 29.5-30.0 GHz (Earth-to-space) frequency bands. The satellites will use inter-satellite links at optical frequencies. Telesat requests a waiver of section 2.106 of the Commission's rules and the Commission's Ka-band Plan and a waiver of section 25.157 of the Commission's rules.

The Boeing Company (SAT-LOA-20161115-00109)

The Boeing Company requests authority to deploy and operate a NGSO system in the FSS and mobile-satellite service (Call Sign S2977). Boeing proposes a constellation of 60 satellites in elliptical orbits, with an apogee at an altitude of 44,221 km and a perigee at an altitude of 27,355 km. Boeing seeks authority to operate in the 17.8-20.2 GHz (space-to-Earth) and 27.6-30 GHz (Earth-to-space) frequency bands. Boeing requests waivers of sections 2.106, 25.202(a)(1), 25.145(c)(1), 25.156(d)(4), 25.157(e), 25.164(b), and 25.165 of the Commission's rules.

Space Norway AS (SAT-PDR-20161115-00111)

Space Norway AS requests U.S. market access for a NGSO FSS system (Call Sign S2978), which Space

¹ *OneWeb Petition Accepted for Filing; Cut-Off Established for Additional NGSO-Like Satellite Applications or Petitions in the 10.7-12.7 GHz, 14.0-14.5 GHz, 17.8-18.6 GHz, 18.8-19.3 GHz, 27.5-28.35 GHz, 28.35-29.1 GHz, and 29.5-30.0 GHz Bands*, Public Notice, 31 FCC Rcd 7666 (IB July 15, 2016).

Norway states will be licensed by Norway. Space Norway seeks market access for two satellites in highly elliptical orbits with an apogee at an altitude of 43,509 km and a perigee at an altitude of 8,089 km. Space Norway seeks market access in the 10.7-12.7 GHz (space-to-Earth) and 14.0-14.5 GHz (Earth-to-space) frequency bands, and the 19.7-20.2 GHz (space-to-Earth) and 29.5-30.0 GHz (Earth-to-space) frequency bands. Space Norway's system will also utilize the 18.2-19.2 GHz (space-to-Earth) and 28.0-29.0 GHz (Earth-to-space) frequency bands for telemetry, tracking and command operations. Space Norway requests waivers of sections 25.145(c), 25.146(i) and 25.202(a) of the Commission's rules.

LeoSat MA, Inc. (SAT-PDR-20161115-00112)

LeoSat MA, Inc. requests U.S. market access for a NGSO FSS system (Call Sign S2979), which LeoSat states will be licensed by the Netherlands. LeoSat seeks market access for approximately 78 high-throughput LEO satellites and six in-orbit spare satellites, operating in six polar circular orbital planes at an altitude of approximately 1,400 km. LeoSat seeks market access in the 17.8-18.6 GHz and 18.8-20.2 GHz (space-to-Earth), and the 27.5-29.1 and 29.5-30.0 GHz (Earth-to-space) frequency bands, as well as telemetry, tracking and command in the 18.8-18.81 GHz (space-to-Earth) and the 28.6-28.61 GHz (Earth-to-space) frequency bands. The satellites will use inter-satellite links at optical frequencies. LeoSat requests a waiver of the Commission's Ka-band Plan and section 2.106 of the Commission's rules, as well as a waiver of section 25.157(e) of the Commission's rules. We are deferring a determination concerning acceptability for filing for the 19.3-19.6 GHz band portion of LeoSat's request. See No. 5.523B of the ITU Radio Regulations.

Karousel LLC (SAT-LOA-20161115-00113)

Karousel LLC requests authority to deploy and operate a NGSO FSS system (Call Sign S2980). Karousel proposes a constellation of up to 12 operational satellites in three highly inclined elliptical orbits with apogees at altitudes of 40,002.3 km and perigees of 31,569.5 km. Karousel seeks authority to operate in the 10.7-12.7 GHz, 17.8-19.3 and 19.7-20.2 GHz (space-to-Earth) and 14.0-14.5 and 27.5-30.0 GHz (Earth-to-space) frequency bands. Karousel requests waivers of the Commission's Ka-band Plan and section 2.106 of the Commission's rules, as well as sections 25.103, 25.146(a), 25.156(d)(4), 25.156(d)(5), and 25.202(a)(1), of the Commission's rules. We are deferring a determination concerning acceptability for filing for the 29.1-29.5 GHz band portion of Karousel's request. See 5.535A of the ITU Radio Regulations.

O3b Limited (SAT-AMD-20161115-00116)

O3b Limited amends its pending request to modify its prior grant of U.S. market access, IBFS File No. SAT-MOD-20160624-00060, by adding satellites and frequencies to its medium earth orbit constellation (Call Sign S2935), operating under the authority of the United Kingdom, with an apogee and perigee at an altitude of 8062 km. O3b seeks the following: (1) to add market access in the 19.7-20.2 GHz and 29.5-30.0 GHz frequency band to four of the eight satellites proposed in the modification application; (2) to add market access for up to twenty-four new satellites (referred to as O3bN) that will operate in a circular equatorial orbit using previously authorized frequencies (17.8-18.6 GHz, 18.8-19.3 GHz (space-to-Earth) and the 27.6-28.4 GHz and 28.6-29.1 GHz bands (Earth-to-space)) and to add the 17.7-17.8 GHz, 19.3-20.2 GHz (space-to-Earth) and 27.5-27.6 GHz, 28.4-28.6 GHz, and 29.1-30.0 GHz (Earth-to-space) frequency bands; and (3) to add market access for up to sixteen new satellites that will operate in an inclined orbit (referred to as O3bI) using the same frequencies as the O3bN system. For this amendment, O3b requests waivers of section 2.106 of the Commission's rules and the Commission's Ka-band Plan, as well as section 25.145(c) of the Commission's rules. We are deferring a determination concerning acceptability for filing for the portions of O3b's request seeking use of the 17.7-17.8, 19.3-19.6 and 29.1-29.5 GHz bands. See 47 C.F.R. § 2.106, US 271, and Nos. 5.523B and 5.535A of the ITU Radio

Regulations.

Audacy Corporation (SAT-LOA-20161115-00117)

Audacy Corporation requests authority to deploy and operate a NGSO FSS system (Call Sign S2982) consisting of three satellites in three inclined circular medium-Earth orbits with a mean orbital altitude of 13,890 km. Audacy proposes to operate in the 19.7-20.2 GHz (space-to-Earth) and 29.50-30.00 GHz (Earth-to-space) frequency bands on a secondary basis. Audacy requests waivers of sections 25.145(c), 25.156(d)(4), and 25.156(d)(5) of the Commission's rules. Audacy also requests the following frequencies for inter-satellite communications with customer satellites: 22.55-23.55 GHz, 24.45-24.75 GHz, 32.30-33.00 GHz, 54.25-56.90 GHz, 57.00-58.20 GHz, and 65.00-71.00 GHz. While Audacy's application is accepted for filing with respect to these inter-satellite frequencies, we have made no determination as to whether a processing round will be initiated for these frequencies and are not inviting additional applications in these frequency bands by this public notice. Audacy also requests to operate in the following bands that are included in the V-Band processing round:² 37.50-42.00 GHz (space-to-Earth), 47.20-50.20 GHz (Earth-to-space), and 50.40-51.40 GHz (Earth-to-space). This portion of Audacy's request is not accepted for filing at this time and will be addressed in connection with a separate public notice concerning the V-Band processing round.

Space Exploration Holdings, LLC (SAT-LOA-20161115-00118)

Space Exploration Holdings, LLC requests authority to deploy and operate a NGSO FSS system (Call Sign S2983). SpaceX proposes a constellation of 4,425 satellites operating in 83 orbital planes at altitudes ranging from 1,110 km to 1,325 km. SpaceX seeks authority to operate in the 10.7-12.7 GHz (space-to-Earth) and 14.0-14.5 GHz (Earth-to-space) frequency bands; and the 17.8-18.6 GHz and 18.8-19.3 GHz (space-to-Earth), and 27.5-29.1 GHz and 29.5-30.0 GHz (Earth-to-space) frequency bands. SpaceX also proposes a TT&C uplink in the 13.85-14.0 GHz band. SpaceX requests waiver of sections 25.202(a)(1), 25.202(g)(1), 25.157(e), 25.164(b), 25.208(e), 25.145(c), 25.146(i), and 25.146(a) of the Commission's rules, and conditional waiver of any restriction in Section 2.106 of the Commission's rules on SpaceX's proposed use of the 17.8-18.6 GHz band, and waiver of various limitations in the Commission's Form 312, Schedule S, in connection with this application.

ViaSat Inc. (SAT-PDR-20161115-00120)

ViaSat, Inc. requests U.S. market access for a NGSO FSS system (Call Sign S2985), which ViaSat states will be licensed by the Netherlands. ViaSat seeks market access for a constellation of 24 satellites in eight separate inclined circular orbital planes at an altitude of 8,200 km. ViaSat seeks market access in the following frequency bands: 17.8-19.3 GHz, and 19.7-20.2 GHz (space-to-Earth); and 27.5-29.1 GHz and 29.5-30.0 GHz, (Earth-to-space). ViaSat also states that it will use these bands for inter-satellite links. ViaSat requests waivers of section 2.106 and the Commission's Ka-band Plan, as well as sections 25.202(a)(1), 25.112, 25.156(d)(5), 25.210(i), 25.217(b)(1) of the Commission's rules. We are deferring a determination concerning acceptability for filing of ViaSat's request concerning the 18.6-18.8 GHz band. See No. 5.522B of the ITU Radio Regulations. ViaSat also requests market access to operate in the

² *Boeing Application Accepted For Filing In Part; Cut-Off Established For Additional NGSO-Like Satellite Applications Or Petitions For Operations In The 37.5-40.0 GHz, 40.0-42.40 GHz, 47.2-50.2 GHz And 50.4-51.4 GHz Bands*, Public Notice, 31 FCC Rcd 11957 (IB Nov. 1, 2016) (*V-band processing round*).

following bands that are included in the V-Band processing round: 37.50-42.00 GHz (space-to-Earth), 47.20-50.20 GHz (Earth-to-space), and 50.40-51.40 GHz (Earth-to-space). This portion of ViaSat's request is not accepted for filing at this time and will be addressed in connection with a separate public notice concerning the V-Band processing round.

Theia Holdings A, Inc. (SAT-LOA-20161115-00121)

Theia Holdings A, Inc. requests authority to deploy and operate a NGSO FSS system (Call Sign S2986). Theia proposes a constellation of 120 satellites, including eight in-orbit spares, in eight sun-synchronous low-Earth orbits with an average altitude of 800 km for active satellites. Theia seeks authority to operate in the following frequency bands: 10.7-12.2 GHz, 12.75-13.25 GHz, 17.8-18.6 GHz, 18.8-19.3 GHz, and 19.3-20.2 GHz (space-to-Earth); and 14.0-14.5 GHz, 27.50-30.0 GHz (Earth-to-space). Theia also seeks authority to operate in the 1215-1300 MHz (active) and 25.5-27.0 GHz (Earth-to-space) frequency bands to provide Earth Exploration Satellite Service (EESS) operations. While Theia's application is accepted for filing with respect to the 1215-1300 MHz and 25.5-27.0 GHz bands, we have made no determination as to whether a processing round will be initiated for these frequency bands and are not inviting additional applications in these frequency bands by this public notice. Theia requests waivers of sections 25.112(a) and 25.157(e) of the Commission's rules. We are deferring a determination concerning acceptability for filing for the portion of Theia's request seeking use of the 19.3-19.6 and 29.1-29.5 GHz bands. See Nos. 5.523B and 5.535A of the ITU Radio Regulations.

Accepted for filing. The applications listed above are accepted for filing, with the exceptions set forth above. The Commission reserves the right to return any application or petition if, upon further examination, it is determined to be defective and not in conformance with the Commission's rules or policies.

Pleading cycle established. Interested parties may file comments or petitions to deny the applications listed above no later than **June 26, 2017**. Responses to comments and oppositions to petitions must be filed no later than **July 7, 2017**. Replies to oppositions must be filed no later than **July 14, 2017**. Interested parties must file comments or pleadings electronically through IBFS at <http://licensing.fcc.gov/myibfs>.

Ex parte status. The above listed applications are subject to the "permit-but-disclose" provisions of the Commission's rules governing *ex parte* communications. 47 CFR § 1.1206. To provide for uniformity of treatment, we will also treat any other applications considered in this processing round under the "permit-but-disclose" provisions of the *ex parte* rules.

Additional applications. We invite additional applications and petitions for declaratory ruling for NGSO-like satellite operation in the 12.75-13.25 GHz, 13.85-14.0 GHz, 18.6-18.8 GHz, 19.3-20.2 GHz, 29.1-29.5 GHz frequency bands. Applications and petitions filed by **July 26, 2017**, will be considered together with the lead applications for these frequency bands.³ Requests filed after this date may not be entitled to shared use of this spectrum with respect to any grant of applications or petitions filed prior to the cut-off date. Applicants and petitioners that file by the cut-off date will be afforded an opportunity to

³In the 12.75-13.25 GHz band, an application by Theia was accepted for filing. In the 13.85-14.0 GHz band, an application by SpaceX was accepted for filing. In the 18.6-18.8 GHz band, applications or petitions for U.S. market access by Boeing, Space Norway, and Karousel were accepted for filing. In the 19.3-19.7 GHz band, an application by Boeing was accepted for filing. In the 19.7-20.2 GHz band, applications or petitions for U.S. market access by Telesat Canada, Boeing, Space Norway, LeoSat, Karousel, O3b, Audacy, ViaSat, and Theia were accepted for filing. In the 29.1-29.5 GHz band, an application by Boeing was accepted for filing.

amend their requests, if necessary, to conform to any requirements or policies that may be subsequently adopted concerning NGSO-like satellite operation in these bands. Applications must be filed electronically through IBFS at <http://licensing.fcc.gov/myibfs>.

- FCC -